



Attorney Docket No. 06999.0010-00000

**In re Application of:**

Austin SMITH et al.

Group Art Unit: 1632

**Application No.: 09/786,817**

Examiner: Michael Wilson

Filed: March 9, 2001

For: PROPAGATION AND/OR  
DERIVATION OF EMBRYONIC  
STEM CELLS

Commissioner for Patents  
Washington, DC 20231

Sir:

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## RESPONSE TO OFFICE ACTION

This is a response to the Office Action dated December 30, 2002 (Paper No. 9). Applicants have concurrently filed a Petition for Extension of Time together with the fee required under 37 C.F.R. § 1.17(a). With the extension, this response is due on or before February 28, 2003.

Applicants apologize for the typographical error in the provisional species election made in response to the restriction requirement issued in this application (Paper No. 6) and appreciate the opportunity to correct that election. As the Examiner correctly noted, the species elected should have been PD098059, not PD 09059.

However, Applicants disagree with the Examiner that PD098059 is not a species falling within group II (claims 12, 14-21, 25-28, 30-39, 43, 44, and 46-50), directed to compositions comprising (a) a compound that promotes propagation of ES cells and (b)

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a compound that inhibits the ras/MAPK cascade, a culture medium comprising the composition, a method of culturing ES cells with the composition, and a method of culturing ES cells with a compound that inhibits the ras/MAPK cascade.

MEK is a dual specificity protein kinase that phosphorylates both tyrosine and serine residues. Raf binds to and phosphorylates MEK. MEK, in turn, phosphorylates and activates MAP kinase. Thus, inhibitors of MEK are also inhibitors of the ras/MAPK cascade. Applicants have submitted excerpts from three well-known molecular biology textbooks which demonstrate that MAP-kinase is inactive unless specifically activated by MEK. Thus, although elected species PD098059 does fall within group III claims (directed to compositions comprising (a) a compound that promotes propagation of ES cells and (b) a compound that inhibits MEK, a culture medium comprising the composition, a method of culturing ES cells with the composition, and a method of culturing ES cells with a compound that inhibits MEK), it also falls properly within the elected group of claims.

The Examiner's confusion highlights the inappropriateness of the restriction requirement imposed in Paper No. 6. Applicants take this opportunity to reemphasize their traverse of the restriction requirement. The Examiner contends that the individual claim groups are not so linked as to form a single general inventive concept under PCT Rule 13. As demonstrated above, there can be no dispute that this is not true with respect to Group II and Group III claims. Moreover, contrary to the Examiner's assertion, all of the restricted claims share a single inventive concept and corresponding technical feature: each recites a first compound that promotes propagation or survival of ES cells and a second compound that inhibits propagation or survival of ES cells.

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Although the second compounds may vary in the mechanism by which they inhibit the propagation or survival of ES cells, they all share this technical feature and should be examined together. Both the PCT International Searching and Examining Authorities agree that the claims share this a single inventive concept and corresponding technical feature. Accordingly, Applicants respectfully submit that the restriction requirement is not well founded and should be withdrawn in its entirety.

Please grant any additional extensions of time required to enter this response and charge any additional required fees to deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: February 13, 2003

By: 

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